

REMARKS/ARGUMENTS

Claims 1, 2, 4, 6, 7 and 9-12 are pending in this application. Claims 3, 5 and 8 have been canceled.

In response to the comment in the Office Action that the document entitled "DVD" was not in the electronic file, applicant advises that a DVD disk was attached to the last Amendment by applicant filed on or about December 27, 2005, as is attested to by the enclosed copy of the return postcard with which that Amendment was filed and which acknowledges receipt of the DVD. Since the DVD apparently went astray, applicant attaches another copy of the DVD disk to this Amendment. The Examiner is invited to view the DVD, as it illustrates the advantages provided by the weed puller of the present invention, in that it may assist the Examiner to appreciate the features which patentably distinguish the present invention over the prior art.

Claims 1, 2 and 6-8 were rejected for obviousness over Judson (107,060) in view of Lucan (3,952,812) together with Davis (1,706,658), while claim 9 was rejected for obviousness over Judson in view of Lucan alone.

As previously pointed out, the present invention is directed to a weed puller for derooting weeds without cutting them off at their root or jarring them to prevent seeds from becoming dislodged. The weed puller of the present invention slides with its under side along the ground and engages the weed in the gap of the puller, with the roots extending through the gap and into the ground (before they are pulled), while the growth of the weed is disposed above the gap in a weed gathering cradle defined by the weed puller. All weed-engaging edges of the weed puller (including its inner, rounded end) are blunt (i.e. they are dull and not sharp or pointed, which is the meaning of the word blunt), and the inner end of the gap, towards which the V-shaped sides of the gap converge, has a width sufficient to accommodate the root of the weed but insufficient to permit the passage of the weed itself which is being gathered (and supported) in the weed gathering cradle formed by the weed puller.

The weed puller of the present invention has two, angularly inclined (but otherwise substantially flat) portions. One portion is connected to a handle and is substantially perpendicular thereto, while the second portion is angularly inclined, preferably by an angle of about 30°, and is bent towards the handle so that the two sections of the weed puller define a weed gathering cradle.

The gap (or slot) formed by the weed puller defines two prongs which are spaced apart by the gap, and the gap extends from an open end thereof (defined by the spaced-apart prongs) to a blunt, rounded inner end of the gap located in the section of the weed puller from which the handlebar extends. The gap therefore extends from the free end of the prongs past the bending line between the two sections of the weed puller and terminates in a blunt, rounded end which is located in the section of the weed puller from which the handlebar extends.

As a result of this construction, the handle and the section of the weed puller defining the open end of the V-shaped gap are at an obtuse angle to each other, which facilitates engaging weeds to be derooted between the prongs of the weed puller while requiring minimal exertion on the part of the user of the tool.

The bending line across the width of the weed puller intersects the V-shaped gap so that the inner end thereof is located in the same part of the implement from which the handle extends. The weed gathering cradle defined by the weed puller is therefore located within the area where the weed puller engages the weed, and in particular its root. Once so engaged, the user of the weed puller may either pull the handle generally parallel to the handle in direction 32 (shown in Fig. 3A), or the user can push downwardly on the handle, or he can pull the handle rearwardly to thereby rock the weed puller about the bending line 20 between the two flat portions of the main body to raise the weed gathering cradle relative to the ground and thereby deroot the weed by pulling the root out of the ground.

One of the important objectives of the present invention is to make sure the weed, including its root, is pulled out of the ground, because if the roots are cut off, intentionally or inadvertently, the weed will reappear even though its above-ground growth might have been

removed. To assure that the root is pulled from the ground with the weed, an inner section of the gap proximate the rounded, blunted inner end of the gap is substantially parallel, as is illustrated in Fig. 1 and as is described in paragraph [0025] of the Substitute Specification, which discloses “that the edges leading to radiused notch 6 are themselves very slightly tapered so as to wedge gathered roots within the notch”. In other words, the gap formed in the weed puller of the present invention converges towards the inner end of the gap, first relatively strongly and thereafter only lightly or not at all, as is shown in Fig. 1 and described in paragraph [0025].

Independent claim 9 was rejected for obviousness over Judson and Lucan because the former shows a weed pulling tool and Lucan teaches that such a tool may have first and second plates which are both flat. It was observed that the drawings of Judson “do not show the notch to be sharpened”.

Judson expressly discloses that the beveled edges of its pulling tool are sharp. Judson states that “[t]he notches are beveled from the back or lower side, to form edges on the front or upper side,” Although the drawings of Judson do not show this, by beveling the back side of plate A “to form edges”, the edges are necessarily knife-like edges that are formed by beveling the plate.

Thus, contrary to the assertion in the Final Rejection, Judson expressly discloses that the edges defining the V-shaped gap of its pulling tool are sharp and not blunt.

The rejection of claim 9 additionally relied on the observation that the V-shaped notch is considered to be “blunt” since “blunt” is a relative term, and the drawings (presumably of Judson) “do not show the notch to be sharpened”. Applicant submits that both of these observations are in error.

The word “blunt” is not a relative term. “Blunt” means not sharp, as is well understood and confirmed by dictionary definitions. For example, The American Heritage Dictionary of the English Language, New College Edition, defines “blunt” as “having a thick, dull edge or end; not sharp or pointed” (emphasis added). This is precisely the manner in which the word “blunt” is used in this application and in claim 9.

Thus, “blunt” is not a relative term and means that the edges of the gap, which claim 9 requires to be “blunt”, are not sharp or pointed.

Independent claim 9 has been extensively amended and now recites, amongst others, that the V-shaped slot has “opposing, blunted sides and a rounded, blunted inner slot and connecting the sides” Judson expressly discloses non-blunt, i.e. sharp, edges. For this reason alone, claim 9 is not obvious over Judson and Lucan.

Claim 9 further requires that the slot has first and second sections and recites “sides of the slot along the first section thereof converging towards the inner slot end” and that the sides of the second section of the slot, which terminate at the inner slot end, are “substantially parallel”, as is illustrated in Fig. 1 and described in paragraph [0025] of the Substitute Specification. Such a configuration of the slot facilitates engaging the root with the inner (substantially parallel) portion of the slot without the danger of potentially severing the root, which is not taught or suggested by Judson or Lucan.

For at least the foregoing reasons, claim 9 is not obvious over Judson and Lucan.

Claim 9 further requires that the bend between the two plate portions of the weed puller are located “to form a weed gathering cradle defined by the first and second plate portions which overlies the slot” to provide the above-discussed cradle that supports the above-ground weed growth during the derooting operation, which facilitates pulling of the weed, including its root, from the ground. Neither Judson nor Lucan, alone or in combination, suggests to form a tool which has two flat portions joined by a transverse bending line, with the V-shaped slot overlying (or intersecting) the bending line.

For at least this further reason, claim 9 is not obvious over Judson and Lucan.

In this context, applicant also notes the observation in the above-referenced Office Action that it would be obvious to one of ordinary skill to make the “second plate of Judson flat” in order to simplify the construction of the tool. Rendering the two parts of the tool flat in no way teaches or in any form suggests to one of ordinary skill in the art to have the V-shaped

groove extend past the bending line into the (first) portion of the main body from which the handle extends.

Applicant therefore submits that claim 9 is not obvious over Judson and Lucan.

Claim 12 depends from claim 9 and requires that the bending angle between the two flat weed puller portions is 30°. This arrangement facilitates pulling the implement of the present invention above ground into a weed-engaging position, without accidentally digging into the ground with the leading edge of the implement because the obtuse angle that the bend forms between the two flat body portions orients the handle so that it extends in a generally forward direction as is illustrated in Fig. 3A.

The prior art of record, and specifically Judson and Lucan, contain no corresponding teaching. Thus, claim 12 is allowable in its own right, and it is further allowable because it depends from an allowable parent claim.

Independent claims 1 and 6 were rejected over Judson and Lucan, for essentially the same reasons why claim 9 was rejected over the same references, in view of Davis (1,706,658), which was relied upon in the rejection of claim 6 as disclosing a “narrow gap at the end of the V-shaped notch”.

Independent claim 6 recites that the V-shaped gap terminates “at a rounded, blunted end of the gap in the first body portion”, and that a first section of the V-shaped gap diverges “at a first, relatively larger angle towards the open end of the gap, a second section of the gap ... [extends] from the rounded, blunted end of the gap to the first section of the V-shaped gap which diverges at a second, relatively lesser angle towards the first section of the V-shaped gap to form a relatively narrow slot proximate the rounded, blunted end of the gap”

Judson teaches to provide a weed puller which has a V-shaped slot (that terminates in a point, not a rounded end) and which does not have blunted edges, but sharpened edges defined by a bevel in the tool, as was discussed above.

Lucan teaches a gardening tool in which the slots between the tines have substantially constant tapers, the only exception being at the front end of the tines where the tines converge to form pointed ends. Proximate the rounded ends of the gaps, however, the taper of the gaps is no different than towards a front end of the tool. Thus, Lucan does not teach or in any form suggest a weed puller with a V-shaped gap where the angle of divergence at the inner portion of the gap is less than the angle of divergence at the remainder of the gap "to form a relatively narrow slot proximate the rounded, blunted end of the gap", as required by claim 6.

Davis shows a gap in its hoe but does not otherwise describe the shape of the edges defining the gap. Davis shows in Fig. 2, but nowhere describes, that the gap might be curved from tip 19 of prongs 17, 18 to the "U-shaped cutting portion 20" defining the inner end of the gap. Davis does not teach or suggest to one of ordinary skill in the art to provide the weed puller with a blunted edge, which is an edge formed to prevent the cutting of roots, to assure the roots are pulled out of the ground with the above-ground weed growth engaged by the weed puller.

Thus, Judson is devoid of any relevant disclosure concerning the configuration and placement of the V-shaped gap in the weed puller as recited in claim 6; Judson only discloses to form a straight-line V-shaped cutout that has sharp, not blunted, edges and terminates in a pointed end, which is undesirable because such configuration has a tendency to pinch and break or sever the below-ground root from the above-ground growth as the implement is pulled into engagement with the weed. Judson does not teach or suggest to one of ordinary skill in the art to configure the V-shaped gap in the weed puller as recited in claim 6, and Judson also does not teach or suggest the different angular inclinations of the gap as recited in claim 6, while Davis teaches a weed puller with a gap having a rounded inner end with a sharp edge so that it can function as a "U-shaped cutting portion".

All three references disclose gaps that are narrower at the inner end than at the outer end, but none of the references disclose or suggest to form the gap with inner and outer portions that have lesser and greater angular inclinations, respectively, so as to form an inner, narrow slot proximate to a blunted end as part of the gap which has substantially parallel sides.

In view of the foregoing, applicant submits that claim 6 is not obvious over Judson, Lucan and Davis.

Claim 11 depends from claim 6 and further recites that the two body portions define a weed gathering cradle in the vicinity of the bending axis so that “the gap overlies the weed gathering cradle to facilitate pulling the weeds including their roots from the ground when the weed gathering cradle supports the weeds while their roots extend through the gap”. Neither Judson, nor Lucan or Davis, disclose or in any form suggest the formation of a weed gathering cradle that overlies the bending axis. Claim 11 is therefore allowable in its own right. It is further allowable because it depends from allowable parent claim 6.

Independent claim 1 was rejected over Judson, Lucan and Davis for the same reasons why claim 6 was rejected.

Claim 1 is limited, amongst others, to a weed puller which has a V-shaped gathering gap “formed by blunted opposed V-shaped edges on either side of the axis which extend from the free ends of the prongs to a blunted, rounded inner end of the gap”. For the reasons discussed above in connection with independent claim 6, none of the three references applied against claim 1, individually, or in combination, disclose or suggest to one of ordinary skill in the art to form a V-shaped gap formed by blunted sides of the prongs and a blunted, rounded inner end of the gap. For this reason alone, claim 1 is not obvious over these references.

Claim 1 further requires that the body of the weed puller has planar first and second body portions and that “the second body portion [includes] portions of the two prongs being bent towards the handle at an obtuse angle along the bending axis to form a weed pulling cradle area between the first body portion and the second body portion” This aspect of claim 1 requires that the gap of the weed puller extend past the bend between the two flat body portions (that is, it extends from the second body portion into the first body portion) to define the weed pulling cradle so that the latter overlies the gap, as was discussed in detail above.

None of the three references applied against claim 1 disclose or in any form suggest an arrangement in which a bend between the flat body portions is provided to define a

weed pulling cradle. The only reference which shows bending lines, Lucan, teaches that the gaps end well short of the bending lines 15 between the flat sections 13, 14 and head 11. There is no suggestion or motivation in any of the other references to modify Lucan by repositioning the bending lines relative to the gaps between the tines.

Thus, the applied references do not disclose or suggest to one of ordinary skill in the art to extend the V-shaped gap past the bend between the two flat sections of the weed puller.

For at least this further reason, Judson, Lucan and Davis, taken singly or in combination, do not render claim 1 obvious.

Claims 2 and 3 depend from claim 1 and are directed to specific features of the present invention, and since they depend from allowable parent claim 1, they too are in condition for allowance.

The efficacy of the weed puller of the present invention is well illustrated in the enclosed DVD. This efficacy, which stems from the arrangement of the V-shaped gap, the blunted edges defining the gap, and the bend and its location relative to the gap, is also the source for the commercial success and the widespread acceptance of the weed puller as demonstrated by the materials attached to the Amendment filed December 25, 2005 and discussed on pages 12 and 13 thereof.

This commercial success and acknowledgment by others is powerful evidence of the non-obviousness of the pending claims.

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Amendment
Reply to Office Action of February 28, 2006

PATENT

CONCLUSION

In view of the foregoing, applicant submits that this application is in condition for allowance, and a formal communication to that effect at an early date is requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 273-4730 (direct dial).

Respectfully submitted,



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